

## **REMARKS**

### **Summary**

The above amendments and these remarks are responsive to the final Office action dated January 19, 2006. This response is accompanied by a petition for extension of time extending the period for response by two months, a request for continued examination, and the requisite fees.

In the Office action, claims 10-12, 19, 25 and 32 were rejected as being anticipated by newly cited Lovberg et al. The above amendments cancel claims 19 and 32, and amend claims 10, 11, 12 and 25. Claims 13-18, 20-24 and 26-31 were withdrawn previously. Claims 12, 19 and 25 are generic.

In view of the amendments above and the remarks below, the applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

### **Rejections under 35 USC § 102**

In the last Office action, claims 10-12, 19, 25 and 32 were rejected under 35 USC § 102 as being anticipated by newly cited Lovberg et al., US 2004/0056790 A1.

Claim 10 is amended to be directed to an imaging system comprising a frame extending around a single subject position; at least three antenna arrays fixedly mounted to the frame at spaced-apart locations distributed around and spaced from the single subject position, each array including at least one antenna unit configured to transmit directly toward and receive directly from a subject in the subject position,

electromagnetic radiation in a frequency range of about 200 MHz to about 1 THz, from a position fixed relative to and spaced from the single subject position, each antenna array transmitting electromagnetic radiation toward a portion of a subject located in the subject position that does not receive electromagnetic radiation from at least one other antenna array; a transceiver configured to operate each antenna array and to produce an output representative of the radiation received while the subject is in the single subject position; and a processor adapted to convert the transceiver output into image data representative of an image of the subject.

Lovberg et al. disclose two different multi-array portals, both of which require movement of a subject through the portals during use. Figure 3A shows what may be considered a double portal in that first and second arrays, disposed on opposite sides of a subject travel path, are directed at an upstream portion of the subject travel path, and third and fourth arrays, mounted respectively with the first and second arrays, are directed at a downstream portion of the subject travel path. Each pair of upstream and downstream arrays provides scanning of the subject as the subject moves along the travel path. This embodiment provides only two antenna arrays directed at a single subject position, and requires the subject to move along a substantial length of the travel path at a controlled rate in order to image all sides of the subject. This embodiment does not have at least three antenna arrays fixedly mounted to the frame at spaced-apart locations distributed around and spaced from the single subject position, as required by claim 10.

Figure 6 of Lovberg et al. discloses a similar portal configuration that uses a pair

of generally oppositely directed arrays on each side of the subject travel path and mirrors that reflect each of the antenna beams at a common point in the subject travel path. The subject is scanned by moving along the subject travel path through the converging beams. Radiation is transmitted indirectly from the antenna arrays by reflecting the radiated beam with the mirrors, rather than directly as provided by the embodiment of Figure 3A and as required by claim 10, in which case the radiation travels in a straight line between the antenna arrays and the subject position. The configuration of Figure 6 results in a transmit beam that is much longer than that required when the arrays are configured to transmit radiation directly toward and receive radiation directly from a subject in the subject position, as required by claim 10.

In order for there to be anticipation under 35 U.S.C. § 102, every element of a claimed invention must be disclosed in a single reference. Since claim 10 claims features that are not disclosed by Lovberg, claim 10 is patentably distinct from Lovberg et al., and withdrawal of the rejection is requested.

Furthermore, because claim 11 depends from claim 10, claim 11 is allowable for at least the same reasons as claim 10. Further, claim 11 is amended to delete the limitations that were added to claim 10, and is now directed to a system according to claim 10, in which the at least three antenna arrays direct electromagnetic radiation toward the entire circumference of a subject located in the single subject position. The embodiment of Figure 3A of Lovberg et al. discloses only two antenna arrays that are directed toward a single side of a subject. The embodiment of Figure 6 discloses narrow beams that image spots on a subject in a single subject position. It is only by

the subject moving through the portal of Lovberg et al. that radiation is directed toward the entire circumference of a subject, not while the subject is in a single subject position. Accordingly, this feature is not shown in Lovberg et al. and the rejection of claim 11 under 35 U.S.C. § 102 is improper.

Claim 12 is directed to a method of imaging comprising transmitting toward a subject in a single subject position, electromagnetic radiation in a frequency range of about 200 MHz to about 1 THz, from at least three positions fixed relative to and spaced around the single subject position; scanning the transmitted electromagnetic radiation across at least a portion of the single subject position from each of the at least three fixed positions; receiving from the subject reflected electromagnetic radiation; producing an output representative of the received radiation; and converting the output into image data representative of an image of the subject.

As mentioned in the previous response, Figures 7 and 8 of the application illustrate examples of systems that may be used to perform the method claimed in claim 12. These figures illustrate systems in which each antenna unit scans a subject position from the position of the antenna unit by pivoting about a fixed pivot axis. Each of these antenna units resides at a position that is fixed relative to the subject position.

Claim 12 is distinguishable from Lovberg et al. for the reasons that claim 10 is distinguishable, as discussed above. Accordingly, withdrawal of the rejection is requested.

Claim 25 is directed to a system of imaging comprising means for transmitting toward a subject in a single subject position, electromagnetic radiation in a frequency

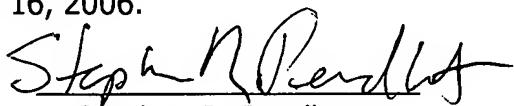
range of about 200 MHz to about 1 THz, from at least three positions fixed relative to and spaced around the single subject position; means for scanning the transmitted electromagnetic radiation across at least a portion of the single subject position from each of the at least three fixed positions, with the scanning from each of the at least three fixed positions providing a scanning of a complete circumference of the subject in the single subject position; means for receiving from the subject reflected electromagnetic radiation; means for producing an output representative of the received radiation; and means for converting the output into image data representative of an image of the subject.

Claim 25 is distinguishable from Lovberg et al. for at least the reasons that claims 10-12 are distinguishable, as discussed above. Accordingly, Loveberg et al. cannot anticipate claim 25, and withdrawal of the rejection is requested.

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, to: Mail Stop AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on June 16, 2006.



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Respectfully submitted,

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